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TITLE: A METAL PARTICLE, ITS PREPARATION AND USE, AND A MATERIAL OR DEVICE COMPRISING THE METAL PARTICLE

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INVENTOR-INFORMATION:

NAME
BUINING, PAUL ALEXANDERCOUNTRY
N/A

ASSIGNEE-INFORMATION:

NAME
UNIV UTRECHTCOUNTRY
NL

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A metal particle comprising a metal core and a silane shell, wherein said core comprises a metal selected from the group consisting of gold, silver, platinum, palladium, rhodium, ruthenium, osmium, iridium and combinations thereof, and said shell comprises a mercaptosilane residue bound to said metal core. The silane shell may be surrounded by a further shell, which comprises a silicate, titanate, zirconate, aluminate, borate or, preferably, silane residue. The residues in this further shell may be cross-linked with each other. The particle may be a colloidal particle, and its size may be 5 nm or lower, such as 0.8 to 1.5 nm. The particle may carry a covalently attached foreign molecule. A method for preparing the particle, a material or device comprising the particle embedded in a matrix or carried on a support, and various uses of the particle.

